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EXAMINER	
BISSETT, MELANIE D	

ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/734,401	BUELOW ET AL.	
	Examiner	Art Unit	
	Melanie D. Bissett	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ ~~Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)~~ Paper No(s)/Mail Date *4/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show Figure 2 as described in the specification (p. 22). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4-9, 11-15, 17-19, 25-35, 37, and 45-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuriu et al. Kuriu et al. (US 5,562,996) can be found on the applicant's Form PTO-1449.

3. Kuriu discloses multi-layer films, where the films contain at least one layer of blended polyamide (abstract). The blending of crystalline and amorphous polyamide materials promotes film rupture resistance (col. 1 lines 48-57). Since the films are used to package meat products (col. 7 lines 29-37), it is the examiner's position that the multi-layer structures are capable of the claimed intended use as bone-in meat packaging films. Packaging bags and tubes are taught (col. 7 lines 38-45). Preferred crystalline polyamides to be blended with the amorphous polyamides include nylon 6 or nylon 6,66 (col. 2 lines 30-41). Preferred multi-layer structures include core EVOH layers sandwiched between two mixed polyamide layers and having outer polyolefin layers (col. 4 lines 47-61), and preferred EVOH resins comprise 25-50 mol% of ethylene content (col. 4 lines 18-23).

4. Regarding the blend layer of claims 17 and 37, the reference also teaches a polyamide layer having 30 parts by weight of an aromatic crystalline polyamide per 100 parts by weight of aliphatic polyamide, where a preferred layer comprises 75-95% by weight crystalline polymers and 5-25% by weight amorphous polymers (col. 2 line 53-col. 3 line 16). At 75% by weight of

crystalline polymer, the blend layer would contain 17% aromatic polyamide, 25% by weight amorphous polyamide, and about 60% by weight of aliphatic polyamide. At 95% by weight crystalline polyamide, the blend layer would contain 22% by weight aromatic polyamide, 5% amorphous polyamide, and 73% by weight aliphatic polyamide. Thus, one skilled in the art would envision a blend of the applicant's claimed composition.

5. The reference teaches a method of coextruding the layers and biaxially stretching the resulting film (col. 6 lines 38-43) to form films having thicknesses up to 100 μm (3.9 mils; col. 5 lines 59-61). Examples 11-16 show layer structures of mixed polyamide (90% by weight nylon 6, 10% by weight amorphous polyamide; or PA_1, a blend of nylon 6, a crystalline aromatic polyamide, and an amorphous polyamide), EVOH, mixed polyamide (usually same as outer layer), modified polyolefin tie layer, and LLDPE heat seal layer. Thus, the barrier layer is between the sealant and a polyamide layer, a polyamide layer is between a sealant and barrier layer, the structure comprises an outer polyamide layer, and two polyamide layers surround the EVOH barrier layer. Tenter frames are used to orient the films in the lateral direction (col. 6 lines 46-50).

6. Because the reference teaches heat sealing and the formation of envelopes, bags, and pouches, it is the examiner's position that one of ordinary skill in the art would envision heat sealing one wall to itself to form a space for a meat product (see col. 7 lines 38-45; col. 9 lines 3-20).

7. Regarding the orientation factor, the examples show stretching the films biaxially 3 x 3.5 times for an total orientation ratio of 10.5.

8. Claims 1, 4-9, 11-15, 18-20, 22-35, 38, 40-43, and 45-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Ramesh et al. ('228). Ramesh et al. (US 6,274,228 B1) can be found on the applicant's Form PTO-1449.

9. Ramesh discloses a heat shrinkable film comprising an EVOH film, where the shrink properties are attained by annealing the film (abstract). Since the films are used to package meat products (col. 26 line 66-col. 27 line 10), it is the examiner's position that the multi-layer structures are capable of the claimed intended use as bone-in meat packaging films. The EVOH resin preferably comprises 38-44 mol% of ethylene content (col. 5 lines 61-64). Various polyamide, tie, ionomer layers, and polyolefin layers are also taught. The films are biaxially oriented (col. 12 lines 9-30) and then annealed to form a uniform flat width and dimensionally stabilize the film (col. 12 lines 44-51). Irradiation is performed to crosslink the polymer networks of the layers (col. 24 lines 20-36). Also, the examples show steps of immersing the films in hot water before orientation. It is the examiner's position that this step would inherently serve to moisturize the structure, since water is applied to the layers.

10. Example 1 shows multi-layer films formed by coextruding, in tube shape, an outer heat sealant ionomer layer, modified polyolefin tie layer, polyolefin layer, modified polyolefin tie layer, crystalline blend of nylon 6 and nylon 6/12, EVOH layer, crystalline blend of nylon 6 and nylon 6/12, modified polyolefin tie layer,

and heat sealant LLDPE blend layer. Thus, the barrier layer is between the sealant and a polyamide layer, a polyamide layer is between a sealant and barrier layer, two polyamide layers surround the EVOH barrier layer, and an outer layer of ionomer or LLDPE is noted. Example 2 shows a similar structure, where the film has an outer polyamide layer. The heat sealant LLDPE layer has a thickness greater than the outer ionomer or polyamide layers; thus, reference teaches a heat sealant layer having a greater volume of polymer than an outer layer. Examples 1 and 2 show total orientation ratios of 8. Note also that the LLDPE outer layer comprises an ethylene-acrylic acid copolymer listed by Ramesh as a tie material. Thus, the exemplified film comprises a tie concentrate blended therein.

11. The reference specifically notes that preferred polyamides include nylon 6, nylon 6/66, and blends of crystalline polyamides and teaches that the polyamide layer may contain an amorphous polyamide (col. 17 lines 7-45). Polyamides selected from nylon 6, nylon 66, and nylon 6/66 are preferably used in amounts of at least 70% by weight. Thus, one skilled in the art would envision including an amorphous polyamide in amounts of less than 30% by weight in the polyamide layers. Film thicknesses range from 0.0075 mm to 0.25 mm (0.30-9.8 mils), preferably 0.035-0.09 mm (1.4-3.5 mils) (col. 24 lines 1-19).

12. Regarding the irradiation of the structures, the applicant indicates on page 18 of the present specification that the radiation dosage relates to the crosslinking between and within the material layers. Since the reference teaches the same materials and irradiation techniques as those employed by the

applicant (col. 24 lines 20-60), it is the examiner's position that the irradiation steps taught by Ramesh would inherently serve to promote crosslinking between and within the layers of the multi-layer structure.

13. Because the reference teaches sealing layers as layers to be heat sealed to itself or another film (col. 4 lines 11-42) and because the reference teaches sealing a film to itself to form a meat bag or pouch (col. 27 lines 10-20), it is the examiner's position that one of ordinary skill in the art would envision sealing a first film to itself to form a space for meat.

14. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Ramesh et al. ('228) as evidenced by Vicik. Vicik (US 5,549,943) can be found on the applicant's Form PTO-1449.

15. Ramesh teaches methods of passing irradiated films through a heated water bath before orientation (examples). Although the reference does not specifically point out a plasticizing step, Vicik teaches that passing coextruded flattened tubes through heated water baths serves to plasticize polyamide layers of the multi-layer structure with water and facilitate orientation (col. 19 line 56-col. 20 line 3). Thus, it is the examiner's position that the multi-layer structures of Ramesh are inherently plasticized during the immersion step.

16. Claims 1, 4-6, 9, 18-20, 22-30, and 44-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Ramesh ('285). Ramesh (US 6,346,285 B1) can be found on the applicant's Form PTO-1449.

17. Ramesh discloses a heat shrinkable film comprising an EVOH film, where the shrink properties are attained by annealing the film (abstract). Since the films are used to package meat products (col. 19 lines 32-38), it is the examiner's position that the multi-layer structures are capable of the claimed intended use as bone-in meat packaging films. Various polyamide, tie, ionomer layers, and polyolefin layers are also taught. The films are biaxially oriented and then annealed (col. 18 lines 4-18), where orientation factors are preferably between 4 and 16 (col. 17 lines 44-45). Irradiation is performed to crosslink the polymer networks of the layers (col. 18 lines 42-49). Also, the examples show steps of immersing the films in hot water before orientation. It is the examiner's position that this step would inherently serve to moisturize the structure, since water is applied to the layers. Film thicknesses range from 1.5-3 mils for shrinkable bags (col. 13 lines 28-38).

18. Example 1 shows multi-layer films formed by coextruding, in tube shape, an outer LLDPE blend layer capable of heat sealing, a tie layer, a crystalline nylon blend layer, EVOH, a tie layer, a polyolefin blend layer, and an outer crystalline nylon blend layer. Thus, the barrier layer is between the sealant and a polyamide layer, a polyamide layer is between a sealant and barrier layer, two polyamide layers surround the EVOH barrier layer, and the film has an outer polyamide layer. Note also that the LLDPE layer adjacent the nylon outer layer comprises an anhydride-grafted LLDPE, a polymer that serves as a tie material. Thus, the exemplified film comprises a tie concentrate blended therein. The films of the examples show about 25% free shrink at temperatures of 185 °F and 205

°F in at least one direction (Table 5). It is the examiner's position that these temperatures are "about 200 °F"; thus, the reference teaches the claimed free shrink values.

19. Regarding the irradiation of the structures, the applicant indicates on page 18 of the present specification that the radiation dosage relates to the crosslinking between and within the material layers. Since the reference teaches the same materials and irradiation techniques as those employed by the applicant (col. 18 lines 50-67), it is the examiner's position that the irradiation steps taught by Ramesh would inherently serve to promote crosslinking between and within the layers of the multi-layer structure.

20. Because the reference teaches sealing layers as layers to be heat sealed to itself or another film and because the reference teaches sealing a film to itself to form a meat bag or pouch (examples; col. 19 lines 11-31), it is the examiner's position that one of ordinary skill in the art would envision sealing a first film to itself to form a space for meat.

21. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Ramesh et al. ('285) as evidenced by Vicik.

22. Ramesh teaches methods of passing irradiated films through a heated water bath before orientation (examples). Although the reference does not specifically point out a plasticizing step, Vicik teaches that passing coextruded flattened tubes through heated water baths serves to plasticize polyamide layers of the multi-layer structure with water and facilitate orientation (col. 19 line 56-col.

20 line 3). Thus, it is the examiner's position that the multi-layer structures of Ramesh are inherently plasticized during the immersion step.

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

24. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramesh et al. ('228) in view of Brax et al.

25. Ramesh applies as above, teaching packaging for a variety of meat products and teaching a method of shrinking the package around the foodstuffs (col. 27 lines 4-35) but failing to specify packages of bone-in meat. Ramesh's films exhibit improved inter-ply adhesion, wrinkle-free properties, package tightness, and cook-out (col. 28 lines 8-12). Brax teaches the conventionality of using biaxially oriented thermoplastic films to package bone-in meats, where the films shrink around the meats (col. 2 lines 13-42). Since it is known to package bone-in meats within biaxially oriented films, it is the examiner's position that it would have been prima facie obvious to shrink the films of Ramesh's invention around a bone-in meat product to provide packaging with Ramesh's improved properties to bone-in meats.

26. Claims 10 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramesh et al. ('228) in view of Roberts.

27. Ramesh applies as above, teaching seal layers and outer layers but failing to teach the use of a LLDPE/LDPE blend. Roberts teaches a shrink film comprising a blend of LDPE, LLDPE, and two other polyolefins for packaging fish or poultry (abstract). The films are processed by extrusion, orientation, and irradiation like the films of Ramesh (col. 5 lines 30-51). They provide improved strength, stiffness, heat sealing properties, and feel (col. 2 lines 1-22) and can be applied to multilayer films (col. 5 lines 19-25). Thus, it is the examiner's position that it would have been prima facie obvious to use LDPE/LLDPE blends as heat seal or outer layers in the multi-layer films of Ramesh's invention to provide the films with improved heat sealing ability, strength, stiffness, and feel.

28. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ramesh et al. ('228) in view of Ramesh ('285).

29. Ramesh ('228) applies as above, teaching heat shrinkable films and suggesting free shrink values at lower temperatures but failing to teach free shrink values at temperatures around 200 °F. Ramesh ('285) teaches that higher free shrink values at higher temperatures serve to form highly shrinkable films with improved shape formation around the food product (col. 18 lines 4-41). Examples show the applicant's claimed values. Thus, it is the examiner's position that it would have been prima facie obvious to form films having the

applicant's claimed free shrink values in the Ramesh ('228) invention to improve the shapeability of the films.

Double Patenting

30. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

31. Claims 1, 4-13, 15-16, 18-20, 25-27, 30-33, 35-36, 38-41, and 43 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of copending Application No. 10/735,567. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method claims of the copending application would form the package of the present claims. Due to substantial overlapping subject matter, it is the examiner's position that it would have been prima facie obvious to form the presently claimed package from the copending method.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

32. Claims 2-3, 14, 21-24, 28-29, 34, 42, and 45-47 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of copending Application No. 10/735,567 in view of Ramesh et al. ('228).

33. The copending application applies as above, failing to teach the claimed package of bone-in meat, the ratio of semi-crystalline polyamide to amorphous polyamide, the claimed plasticizing and moisturization steps, the claimed effects of the irradiation, the claimed sealed structure, and the claimed orientation properties. Ramesh applies as above for teaching these limitations, where the reference teaches shrinking the films in tube, bag, or pouch form around meat products. The films contain the claimed structures, polyamide materials, and orientation properties. Ramesh teaches these features for films having improved inter-ply bond strength, cook-out prevention, and appearance (col. 3 lines 15-23). Thus, it would have been prima facie obvious to follow the teachings of Ramesh et al. while using the copending method claims to form films having improved inter-ply bond strength, cook-out prevention, and appearance.

This is a provisional obviousness-type double patenting rejection.

34. Claims 17 and 37 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of copending Application No. 10/735,567 in view of Kuriu et al.

35. The copending application applies as above, failing to teach the claimed blend of two crystalline polyamide and an amorphous polyamide. Kuriu applies as above, teaching that blends of crystalline polyamides and amorphous polyamides are preferred to provide improved stretchability and abuse resistance (col. 1 lines 48-57). The claimed amounts are encompassed in the invention (see explanation above). It is the examiner's position that it would have been prima facie obvious to include blends of crystalline polyamides with amorphous polyamides in any amount necessary to optimize the stretchability and abuse resistance of the films.

This is a provisional obviousness-type double patenting rejection.

36. Claim 44 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of copending Application No. 10/735,567 in view of Ramesh ('285).

37. The copending application applies as above, failing to teach free shrink values at temperatures around 200 °F. Ramesh ('285) teaches that higher free shrink values at higher temperatures serve to form highly shrinkable films with improved shape formation around the food product (col. 18 lines 4-41). Examples show the applicant's claimed values. Thus, it is the examiner's position that it would have been prima facie obvious to form films having the

applicant's claimed free shrink values in the copending method claims to improve the shapeability of the films.

This is a provisional obviousness-type double patenting rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melanie D. Bissett
Patent Examiner
Art Unit 1711

mdb